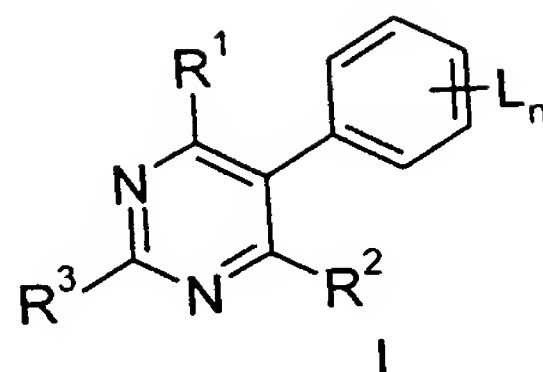


We claim:

1. A pyrimidine of the formula I



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in which the index and the substituents are as defined below:

n is an integer from 1 to 5;

10

L is halogen, cyano, nitro, cyanato (OCN), C₁-C₈-alkyl, C₂-C₁₀-alkenyl, C₂-C₁₀-alkynyl, C₁-C₆-alkoxy, C₂-C₁₀-alkenyloxy, C₂-C₁₀-alkynyloxy, C₃-C₆-cycloalkyl, C₃-C₆-cycloalkenyl, C₃-C₆-cycloalkoxy, C₃-C₆-cycloalkenyloxy, -C(=S)-N(A')A, -C(O)-A, -C(=O)-O-A, -C(=O)-N(A')A, C(A')(=N-OA), N(A')A, N(A')-C(=O)-A, N(A'')-C(=O)-N(A')A, S(=O)_m-A, S(=O)_m-O-A or S(=O)_m-N(A')A;

15

m is 0, 1 or 2;

20

A, A', A'' independently of one another are hydrogen, C₁-C₆-alkyl, C₂-C₆-alkenyl, C₂-C₆-alkynyl, C₃-C₈-cycloalkyl, C₃-C₈-cycloalkenyl, where the organic radicals may be partially or fully halogenated or may be substituted by cyano or C₁-C₄-alkoxy, or A and A' together with the atoms to which they are attached are a five- or six-membered saturated, partially unsaturated or aromatic heterocycle which contains one to four heteroatoms from the group consisting of O, N and S;

25

30

R¹ is C₁-C₁₀-alkyl, C₂-C₁₀-alkenyl, C₂-C₁₀-alkynyl, C₃-C₁₂-cycloalkyl, C₃-C₁₀-cycloalkenyl, phenyl or a five- to ten-membered saturated, partially unsaturated or aromatic heterocycle which is attached via carbon and which contains one to four heteroatoms from the group consisting of O, N and S;

35

R² is halogen, cyano, C₁-C₄-alkyl, C₂-C₄-alkenyl, C₂-C₄-alkynyl, C₁-C₄-alkoxy, C₃-C₄-alkenyloxy or C₃-C₄-alkynyloxy;

R^3 is a five- or six-membered saturated, partially unsaturated or aromatic mono- or bicyclic heterocycle which contains one to four heteroatoms from the group consisting of O, N and S,

5 where the aliphatic, alicyclic or aromatic groups of the radical definitions of L , R^1 , R^2 and/or R^3 for their part may be partially or fully halogenated or may carry one to four groups R^a :

10 R^a is halogen, cyano, C_1 - C_8 -alkyl, C_2 - C_{10} -alkenyl, C_2 - C_{10} -alkynyl, C_1 - C_6 -alkoxy, C_2 - C_{10} -alkenyloxy, C_2 - C_{10} -alkynyloxy, OH, SH, two vicinal groups R^a may be (=O) or (=S), C_3 - C_6 -cycloalkyl, C_3 - C_6 -cycloalkenyl, C_3 - C_6 -cycloalkoxy, C_3 - C_6 -cycloalkenyloxy, $-C(=O)-A$, $-C(=O)-O-A$, $-C(=O)-N(A')A$, $C(A')(=N-OA)$, $N(A')A$, $N(A')-C(=O)-A$, $N(A'')-C(=O)-N(A')A$, $S(=O)_m-A$, $S(=O)_m-O-A$ or $S(=O)_m-N(A')A$, where m , A , A' , A'' are as defined above and where the aliphatic, alicyclic or aromatic groups for their part may be partially or fully halogenated or may carry one to three groups R^b , where R^b has the same meaning as R^a .

20 2. A pyrimidine as claimed in claim 1, in which the index and the substituents are as defined below:

L is halogen, cyano, C_1 - C_8 -alkyl, C_2 - C_{10} -alkenyl, C_2 - C_{10} -alkynyl, C_1 - C_6 -alkoxy, C_2 - C_{10} -alkenyloxy, C_2 - C_{10} -alkynyloxy, $-C(=O)-O-A$, $N(A')-C(=O)-A$ or $S(=O)_m-A$;

25 m is 0, 1 or 2;

30 A, A', A'' independently of one another are hydrogen, C_1 - C_6 -alkyl, C_2 - C_6 -alkenyl, C_2 - C_6 -alkynyl, C_3 - C_8 -cycloalkyl, where the organic radicals may be partially or fully halogenated or A and A' together with the atoms to which they are attached are a partially unsaturated or aromatic heterocycle which contains one to four heteroatoms from the group consisting of O, N and S;

35 R^1 is C_1 - C_{10} -alkyl, C_2 - C_{10} -alkenyl, C_2 - C_{10} -alkynyl, C_3 - C_{12} -cycloalkyl, C_3 - C_{10} -cycloalkenyl;

R^2 is C_1 - C_4 -alkyl, cyano or chlorine,

40 where the aliphatic, alicyclic or aromatic groups of the radical definitions of L , R^1 and/or R^3 for their part may be partially or fully halogenated or may carry one to

four groups R^a :

5 R^a is halogen, cyano, C_1 - C_8 -alkyl, C_2 - C_{10} -alkenyl, C_2 - C_{10} -alkynyl, C_1 - C_6 -alkoxy, C_2 - C_{10} -alkenyloxy, C_2 - C_{10} -alkynyloxy, C_3 - C_6 -cycloalkyl, C_3 - C_6 -cycloalkenyl, C_3 - C_6 -cycloalkoxy, C_3 - C_6 -cycloalkenyloxy, $-C(=O)-A$, $-C(=O)-O-A$, $-C(=O)-N(A')A$, $C(A')(=N-OA)$, $N(A')A$, $N(A')-C(=O)-A$, $N(A'')-C(=O)-N(A')A$, $S(=O)_m-A$, $S(=O)_m-O-A$ or $S(=O)_m-N(A')A$.

10 3. A pyrimidine as claimed in claim 1, in which R^3 is pyrrolyl, pyrazolyl, imidazolyl, 1,2,3-triazolyl, 1,2,4-triazolyl, tetrazolyl, oxazolyl, isoxazolyl, 1,3,4-oxadiazolyl, furanyl, thiophenyl, thiazolyl, isothiazolyl, pyridinyl, pyrimidinyl, pyrazinyl, pyridazinyl, 1,2,3-triazinyl, 1,2,4-triazinyl, pyrrolidinyl, piperidinyl, hexahydro-azepinyl or dihydropyridinyl, where the heterocycle may be attached to the pyrimidine ring via carbon or nitrogen and may carry up to three substituents R^a :

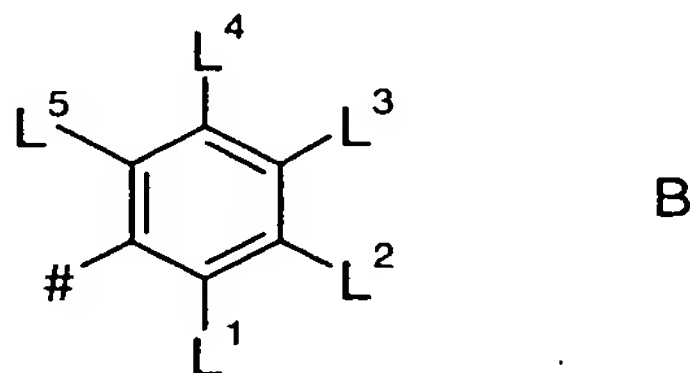
15 R^a is halogen, cyano, C_1 - C_8 -alkyl, C_2 - C_{10} -alkenyl, C_2 - C_{10} -alkynyl, C_1 - C_6 -alkoxy, C_2 - C_{10} -alkenyloxy, C_2 - C_{10} -alkynyloxy, OH, SH, two vicinal groups R^a may be $(=O)$ or $(=S)$, C_3 - C_6 -cycloalkyl, C_3 - C_6 -cycloalkenyl, C_3 - C_6 -cycloalkoxy, C_3 - C_6 -cycloalkenyloxy, $-C(=O)-A$, $-C(=O)-O-A$, $-C(=O)-N(A')A$, $C(A')(=N-OA)$, $N(A')A$, $N(A')-C(=O)-A$, $N(A'')-C(=O)-N(A')A$, $S(=O)_m-A$, $S(=O)_m-O-A$ or $S(=O)_m-N(A')A$.

20

25 4. A pyrimidine as claimed in claim 1, where R^3 is pyrazol-1-yl, 1,2,4-triazol-1-yl, pyridin-2-yl, pyrimidin-2-yl, pyridazin-3-yl, pyrrolidin-2-on-1-yl, piperidin-2-on-1-yl, hexahydro-2H-azepin-2-on-1-yl, pyrrolidin-2-thion-1-yl, piperidin-2-thion-1-yl, hexahydro-2H-azepin-2-thion-1-yl, 1,2-dihydropyridin-2-on-1-yl.

5. A pyrimidine as claimed in claim 1, where R^2 is methyl, chlorine or ethyl.

30 6. A pyrimidine as claimed in any of claims 1 to 6, where the phenyl group substituted by L_n is the group B



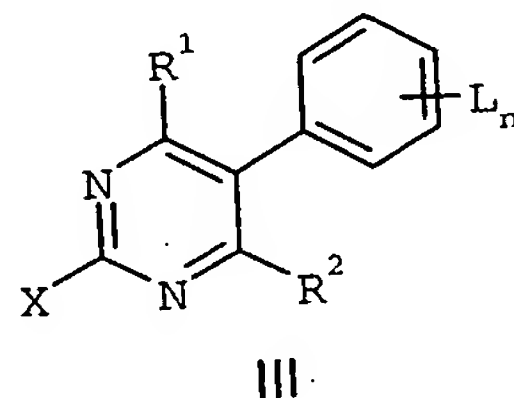
where # is the point of attachment to the pyrimidine skeleton and

35 L^1 is fluorine, chlorine, CH_3 or CF_3 ;

L^2, L^4 independently of one another are hydrogen, CH_3 or fluorine;

- L^3 is hydrogen, fluorine, chlorine, bromine, cyano, CH_3 , SCH_3 , OCH_3 , SO_2CH_3 , $CO-NH_2$, $CO-NHCH_3$, $CO-NHC_2H_5$, $CO-N(CH_3)_2$, $NH-C(=O)CH_3$, $N(CH_3)-C(=O)CH_3$ or $COOCH_3$ and
- L^5 is hydrogen, fluorine, chlorine or CH_3 .

- 5 7. A process for preparing pyrimidines of the formula I as claimed in claim 1, where R^3 is a nitrogen-containing heterocycle attached via nitrogen, which comprises reacting a compound of the formula III,

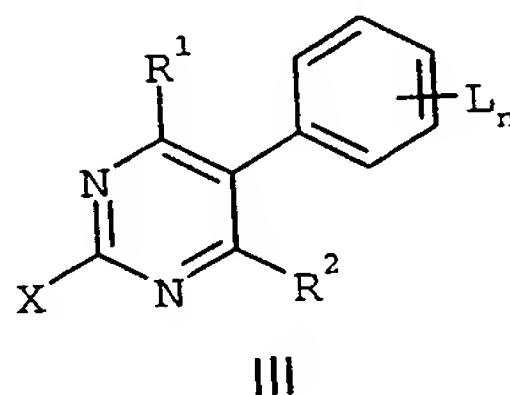


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in which the substituents L , R^1 and R^2 are as defined in claim 1 and X is halogen, C_1-C_6 -alkoxy, C_1-C_6 -alkylthio, C_1-C_6 -alkylsulfoxyl or C_1-C_6 -alkylsulfenyl, with a heterocycle of the formula R^3-H (IV), if appropriate in the presence of a base.

15

8. A intermediate of the formula III



20

where the substituents R^1 and L_n are as defined in claim 1, X is as defined in claim 7 and R^2 is cyano, C_1-C_4 -alkyl, C_2-C_4 -alkenyl, C_2-C_4 -alkynyl, C_1-C_4 -alkoxy, C_3-C_4 -alkenyloxy or C_3-C_4 -alkynyloxy, where the alkyl, alkenyl and alkynyl radicals of R^2 may be substituted by halogen, cyano, nitro, C_1-C_2 -alkoxy or C_1-C_4 -alkoxycarbonyl.

25

9. Residual composition, which comprises a solid or liquid carrier and a compound of the formula I as claimed in claim 1.

30

10. A method for controlling phytopathogenic harmful fungi, which comprises treating the fungi or the materials, plants, the soil or seeds to be protected against fungal attack with an effective amount of a compound of the formula I as claimed in claim 1.